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EXAMINER
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WOO, RICHARD SUKYOON

ART UNIT	PAPER NUMBER
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3639

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/821,482

Applicant(s)

WHITE ET AL.

Examiner

Richard Woo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 101*

- 1) 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

- 2) Claims 1-62 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural

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phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art"

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because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in *Toma*. However, *State Street* never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a

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§101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

In the instant application, there is no significant claim recitation of the data processing system or calculating computer to show the significant change in the data or for performing calculation operations in Claims 1, 12, and 26-27.

In Claims 11 and 62, the computer program (or logic) itself can not be directed to a practical application of the invention in the useful art to accomplish a concrete, useful, and tangible result. When the computer program is actually executed by the computer, the claimed subject matter produces a useful, concrete and tangible result. The mere recitation of "embodied on a computer-readable medium" cannot constitute the actual execution done by the computer system.

### ***Claim Rejections - 35 USC § 103***

3) Claims 1-7 and 11-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki et al. (US 5,767,848) in view of Perry et al. (US 2002/0082882).

As for Claim 1, Matsuzaki et al. discloses a computerized method for evaluating the value of a proposed development program for a product, said method comprising:

defining an alliance structure between a first entity responsible for the development of said product and a second entity (see Fig. 1 for at least two entities responsible for the development);

obtaining a set of development cost assumptions for said proposed development program (see Figs. 1, 3-5);

obtaining a set of sales assumptions representing sales of said product (see Target Value Storage Unit, 12, in Figs. 1, 3); and

performing an economic analysis (see Figs. 1-29 and col. 1, line 62 – col. 3, line 67).

However, Matsuzaki et al. does not expressly disclose the method including: randomly determining, for each of a plurality of iterations, the net present value (NPV) of said proposed development program to thereby obtain a plurality of NPV, each of said plurality of NPVs being determined in accordance with said alliance structure, said set of development cost assumptions, said set of sales assumptions, and at least one probabilistic function; and

performing an economic analysis of said plurality of NPVs.

Perry et al. teaches, for a method for evaluating and shaping a business proposal, that the method improves and grows the business, including factors, such as product developments. The method evaluates the business under Net Present Value (see paragraphs [0062], [0063]).

Because Perry et al. teaches that the evaluation of a business deal may proceed under well known one or more methods, such as ROAA, ROI, ROE, IRR and NPV, for a

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business proposal, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to include in the method of Matsuzaki et al. the steps of determining NPV of said proposed development program to thereby obtain a plurality of NPV, each of said plurality of NPVs being determined in accordance with said alliance structure, said set of development cost assumptions, said set of sales assumptions, and at least one probabilistic function; and performing an economic analysis of said plurality of NPVS, for the purpose of evaluating a number of deals or proposals quickly and calculating a net present value of an investment, revenue stream and a future opportunity for the parties.

As for Claim 2, the modified method of Matsuzaki et al. further discloses the method, wherein said economic analysis is based upon a statistical distribution of said plurality of NPVs (see Supra column of Perry et al.).

As for Claim 3, the modified method of Matsuzaki et al. further discloses the method, wherein said at least one probabilistic function determines whether said proposed development program results in a successfully developed product (see Supra Figs. 1-5 of Matsuzaki et al.).

As for Claim 4, the modified method of Matsuzaki et al. further discloses the method, further comprising the step of generating an output indicative of an economic value of said proposed development program (see the Supra Target Value and Price Unit in Matsuzaki et al.).



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As for Claim 5, the modified method of Matsuzaki et al. further discloses the method, wherein said alliance structure includes at least one component corresponding to a first region and at least one component corresponding to a second region; and each of said plurality of NPVs includes a first economic contribution related to said first region and a second economic contribution related to said second region (see Fig. 7 for the two regions, Mechanical and Electrical).

As for Claim 6, the modified method of Matsuzaki et al. further discloses the method, wherein: said set of development assumptions includes at least one component corresponding to a first region and at least one component corresponding to a second region; and each of said plurality of NPVs includes a first economic contribution related to said first region and a second economic contribution related to said second region (see Id.).

As for Claim 7, the modified method of Matsuzaki et al. further discloses the method, wherein: said set of sales assumptions includes at least one component corresponding to a first region and at least one component corresponding to a second region; and each of said plurality of NPVs includes a first economic contribution related to said first region and a second economic contribution related to said second region (see Supra Fig. 7 and Figs. 11, 13, 15-23).

As for Claim 11, Matsuzaki et al. discloses a computer program, embodied on a computer-readable medium, for evaluating the value of a proposed development program for a product, said computer program comprising:

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a first program code segment containing instructions for defining an alliance structure between a first entity responsible for the development of said product and a second entity (see Fig. 1 for at least two entities responsible for the development);

a second program code segment containing instructions for obtaining a set of development cost assumptions for said proposed development program (see Id.);

a third program code segment containing instructions for obtaining a set of sales assumptions representing sales of said product (see Supra Target Value, Price Unit in Figs. 1, 3); and

a fourth program code segment containing instructions for performing an economic analysis.

However, Matsuzaki et al. does not expressly disclose the program including:

fourth program code segment containing instructions for randomly determining, for each of a plurality of iterations, the net present value (NPV) of said proposed development program to thereby obtain a plurality of NPVS, each of said plurality of NPVs being determined in accordance with said alliance structure, said set of development cost assumptions, said set of sales assumptions, and at least one probabilistic function; and

a fifth program code segment containing instructions for performing an economic analysis of said plurality of NPVS.

Perry et al. teaches, for a method for evaluating and shaping a business proposal, that the method improves and grows the business, including factors, such as product developments. The method evaluates the business under Net Present Value (see paragraphs [0062], [0063]).

Because Perry et al. teaches that the evaluation of a business deal may proceed under well known one or more methods, such as ROAA, ROI, ROE, IRR and NPV, for a business proposal, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to include in the program of Matsuzaki et al. the fourth program code segment containing instructions for randomly determining, for each of a plurality of iterations, the net present value (NPV) of said proposed development program to thereby obtain a plurality of NPVS, each of said plurality of NPVs being determined in accordance with said alliance structure, said set of development cost assumptions, said set of sales assumptions, and at least one probabilistic function, for the purpose of evaluating a number of deals or proposals quickly and calculating a net present value of an investment, revenue stream and a future opportunity for the parties.

As for Claim 12, Matsuzaki et al. discloses a computerized method for evaluating the value of a proposed development program for a product, said method comprising:  
obtaining a set of development cost assumptions corresponding to a number of

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product development stages (see Supra Figs. 1-23 for the number of development stages);

determining, using a probabilistic function, a successfully completed product development stage for said proposed development program (see Figs. 6-10); and

computing time duration for said successfully completed product development stage (see Supra Target Schedule).

However, Matsuzaki et al. does not expressly disclose the method including: calculating a net present value NPV for said proposed development program in response to said set of development cost assumptions and in response to said time duration.

Perry et al. teaches, for a method for evaluating and shaping a business proposal, that the method improves and grows the business, including factors, such as product developments. The method evaluates the business under Net Present Value (see paragraphs [0062], [0063]).

Because Perry et al. teaches that the evaluation of a business deal may proceed under well known one or more methods, such as ROAA, ROI, ROE, IRR and NPV, for a business proposal, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to include in the method of Matsuzaki et al. the steps of calculating a net present value NPV for said proposed development program in

response to said set of development cost assumptions and in response to said time duration, for the purpose of evaluating a number of deals or proposals quickly and calculating a net present value of an investment, revenue stream and a future opportunity for the parties.

As for Claim 13, the modified method of Matsuzaki et al. further discloses the method, wherein: said obtaining step is performed by a client computer system (1000); and said client computer system obtains said set of development cost assumptions from a server computer system (2000) that communicates with said client computer system via a communication link (see Fig. 1 in Matsuzaki et al.).

As for Claims 14-25, the modified method of Matsuzaki et al. does not disclose expressly the limitations from Claims 14-25, e.g., creating said set of development cost assumptions in response to empirical product data; using a second probabilistic function repeating said determining step, said computing step, and said calculating step for a number of iterations; obtaining a set of sales assumptions representing sales of a developed product; a flat sales characteristic with respect to time; etc.,.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the various evaluation and calculation methods as claimed in Claims 14-25 into the modified method of Matsuzaki et al. because Applicant has not disclosed that these well known business practice (unless the applicant claims

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that these practice were invented by the applicant) provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the modified method of evaluating the value of Matsuzaki et al. because the modified method of Matsuzaki et al. relates to a development support system for developing a new product by enterprises and factories.

Therefore, it would have been obvious to further modify the modified method of Matsuzaki et al. to obtain the invention as specified in claims.

As for Claim 26, Matsuzaki et al. discloses a computer program, embodied on a computer-readable medium, for evaluating the value of a proposed development plan for a product, said computer program comprising:

- a first program code segment containing instructions for defining a set of development cost assumptions corresponding to a number of product development stages (see Figs. 1-10 for the various stages);

- a second program code segment containing instructions for determining, using a probabilistic function, a successfully completed product development stage for the proposed development program (see Fig. 2); and

- a third program code segment containing instructions for computing a time duration for the successfully completed product development stage (see Id.).

However, Matsuzaki et al. does not expressly disclose the program including:  
fourth program code segment containing instructions for calculating a NPV for the  
proposed development program in response to the set of development cost  
assumptions and time duration.

Perry et al. teaches, for a method for evaluating and shaping a business  
proposal, that the method improves and grows the business, including factors, such as  
product developments. The method evaluates the business under Net Present Value  
(see paragraphs [0062], [0063]).

Because Perry et al. teaches that the evaluation of a business deal may proceed  
under well known one or more methods, such as ROAA, ROI, ROE, IRR and NPV, for a  
business proposal, it would have been obvious at the time the invention was made to a  
person having ordinary skill in the art to include in the program of Matsuzaki et al. the  
fourth program code segment containing instructions for calculating a NPV for the  
proposed development program in response to the set of development cost  
assumptions and time duration, for the purpose of evaluating a number of deals or  
proposals quickly and calculating a net present value of an investment, revenue stream  
and a future opportunity for the parties.

As for Claim 27, Matsuzaki et al. discloses a computerized method for evaluating  
the value of a proposed development program for a product, said method comprising:

obtaining a set of development cost assumptions for said proposed development program (see Figs. 1-10 and the descriptions thereof); and  
generating a statistical representation of the evaluation.

However, Matsuzaki et al. does not expressly disclose the method further including:

repeatedly calculating a net present value (NPV) for said proposed development program to obtain a plurality of NPVS, each of said plurality of NPVs being calculated in response to said set of development cost assumptions and in response to at least one probabilistic function; and

generating a statistical representation of said plurality of NPVS.

Perry et al. teaches, for a method for evaluating and shaping a business proposal, that the method improves and grows the business, including factors, such as product developments. The method evaluates the business under Net Present Value (see paragraphs [0062], [0063]).

Because Perry et al. teaches that the evaluation of a business deal may proceed under well known one or more methods, such as ROAA, ROI, ROE, IRR and NPV, for a business proposal, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to include in the method of Matsuzaki et al. the steps of repeatedly calculating a net present value (NPV) for said proposed



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development program to obtain a plurality of NPVS, each of said plurality of NPVs being calculated in response to said set of development cost assumptions and in response to at least one probabilistic function; and generating a statistical representation of said plurality of NPVS, for the purpose of evaluating a number of deals or proposals quickly and calculating a net present value of an investment, revenue stream and a future opportunity for the parties.

As for Claims 28-61, the modified method of Matsuzaki et al. does not disclose expressly the limitations from Claims 28-61, e.g., a mean NPV for said plurality of NPVs; a median NPV for said plurality of NPVS; an NPV distribution for said plurality of NPVs; said at least one probabilistic function determines whether said proposed development program results in a successfully developed product; determining, in response to empirical product development data, whether said proposed development program results in a successfully developed product; said at least one probabilistic function determines the duration of said proposed development program; determining, in response to empirical product development data, the duration of said proposed development program; etc.,.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the various evaluation and calculation methods as claimed in Claims 28-61 into the modified method of Matsuzaki et al. because Applicant has not disclosed that these well known business practice (unless the applicant claims

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that these practice were invented by the applicant) provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the modified method of evaluating the value of Matsuzaki et al. because the modified method of Matsuzaki et al. relates to a development support system for developing a new product by enterprises and factories.

Therefore, it would have been obvious to further modify the modified method of Matsuzaki et al. to obtain the invention as specified in claims.

As for Claim 62, Matsuzaki et al. discloses a computer program, embodied on a computer-readable medium, for evaluating the value of a proposed development program for a product, said computer program comprising:

- a first program code segment containing instructions for obtaining a set of development cost assumptions for said proposed development program (see Figs. 1-10 for the various stages); and

- a second program code segment containing instructions for generating a statistical representation of the evaluation (see Figs. 1-10).

However, Matsuzaki et al. does not expressly disclose the program including:

- second program code segment containing instructions for repeatedly calculating a net present value (NPV) for said proposed development program to obtain a plurality

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of NPVs, each of said plurality of NPVs being calculated in response to said set of development cost assumptions and in response to at least one probabilistic function; and

a third program code segment containing instructions for generating a statistical representation of said plurality of NPVS.

Perry et al. teaches, for a method for evaluating and shaping a business proposal, that the method improves and grows the business, including factors, such as product developments. The method evaluates the business under Net Present Value (see paragraphs [0062], [0063]).

Because Perry et al. teaches that the evaluation of a business deal may proceed under well known one or more methods, such as ROAA, ROI, ROE, IRR and NPV, for a business proposal, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to include in the program of Matsuzaki et al. second program code segment containing instructions for repeatedly calculating a net present value (NPV) for said proposed development program to obtain a plurality of NPVs, each of said plurality of NPVs being calculated in response to said set of development cost assumptions and in response to at least one probabilistic function, for the purpose of evaluating a number of deals or proposals quickly and calculating a net present value of an investment, revenue stream and a future opportunity for the parties.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,236,955 is cited to show a management training simulation system and method for developing decision skills of a user in a defined, simulated situation which includes one or more firms controlled by participants in the simulation which cause particular object designs to be injected to the simulation.

US 6,708,327 is cited to show a system for accessing and testing evaluation module via a global computer network. The system is directed to online system for enabling an end user to test and evaluate an electronic, software or computer component such as an evaluation module.

US 2002/0165744 is cited to show a product development process for generating an estimate of the cost of developing and manufacturing the product as well as developing a plan to manufacture the product.

EP 1,100,007 is cited to show a method of optimizing a design concept from proposed multiple concepts for a project having initially identified technical issues.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Woo whose telephone number is 571-272-6813. The examiner can normally be reached on Monday-Friday from 8:30 AM -5:00 PM.

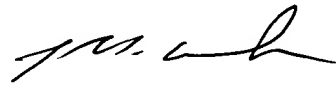
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 571-272-6812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Richard Woo  
Patent Examiner  
Art Unit 3629  
March 20, 2005



JOHN G. WEISS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3500